

OFFICIAL

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from appeal, if required, is respectfully requested. Please amend the above-identified patent application as follows:

IN THE CLAIMS:

Please substitute for corresponding pending claims the claims as shown rewritten below with amendments effected therein. Appendix I is attached hereto having marked versions of said claims with amendments indicated by brackets and underlining.

1. (Twice Amended) A rechargeable battery comprising:

an electrode plate group including a positive electrode plate, in which a positive electrode material is attached to a current collector, a negative electrode plate, in which a negative electrode material is attached to a current collector, the positive and negative electrode plates being superimposed with an intervening separator therebetween, wherein the current collector of one or other of the positive electrode plate and the negative electrode plate is projected on at least one side of the electrode plate group for forming by itself a flat plane on one side of the electrode plate group;

an electrolyte;

a battery container in which the electrode plate group and the electrolyte are accommodated;

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a current collecting plate joined to the flat plane formed at one side of the electrode plate group and contacting the flat plane along a planar surface of the flat plane; and

said electrode plate group being formed by being inserted in a cylindrical molding jig, and being subjected to pressure by a flat surfaced pressing member from an aperture of the cylindrical molding jig sufficient to flatten said electrode plate group, whereby the flat plane is formed at the one side of the electrode plate group.

5. (Amended) A rechargeable battery comprising:

an electrode plate group including:

at least one first current collector;

a first electrode material adjacent the at least one first current collector;

the at least one first current collector being integrally formed and extending beyond the first electrode material and bending at a 90° angle to define a flat plane at one end of the electrode plate group;

at least one second current collector;

a second electrode material adjacent the at least one second current collector;

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the at least one second current collector being integrally formed and extending beyond the second electrode material and bending at a 90° angle to define a flat plane at another end of the electrode plate group; and

an intervening separator for separating the at least one first current collector and the first electrode material from the at least one second current collector and the second electrode material;

an electrolyte;

a battery container for accommodating the electrode plate group and the electrolyte;

a first collector plate contacting a planar surface of the flat plane of the at least one first current collector;

a second collector plate contacting a planar surface of the flat plane of the at least one second current collector; and

said at least one first current collector and said at least one second current collector being formed by being inserted into a cylindrical molding jig, and being subjected to pressure by a flat surfaced pressing member from an aperture of the cylindrical molding jig sufficient to flatten said electrode plate group, whereby the flat plane of the at least one first current collector and the flat plane of the at least one second current collector are formed at opposite ends of the electrode plate group.

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9. (Amended) The rechargeable battery according to claim 6 or 7, wherein a top edge portion of the at least one first current collector is bent orthogonally with respect to the axis of the spiral and forms a continuous spiral edge.

10. (Amended) A method of manufacturing a rechargeable battery comprising the following steps:

providing an electrode plate group including:

at least one first current collector;

a first electrode material adjacent the at least one first current collector;

the at least one first current collector being integrally formed and extending beyond the first electrode material and bending at a 90° angle to define a flat plane at one end of the electrode plate group;

at least one second current collector;

a second electrode material adjacent the at least one second current collector;

the at least one second current collector being integrally formed and extending beyond the second electrode material

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and bending at a 90° angle to define a flat plane at another end of the electrode plate group; and

an intervening separator for separating the at least one first current collector and the first electrode material from the at least one second current collector and the second electrode material;

an electrolyte;

providing a battery container for accommodating the electrode plate group and the electrolyte;

providing a first collector plate contacting a planar surface of the flat plane of the at least one first current collector;

providing a second collector plate contacting a planar surface of the flat plane of the at least one second current collector; and

forming the flat plane of the at least one first current collector and the flat plane of the at least one second current collector at opposite ends of the electrode plate group by inserting the electrode plate group into a cylindrical molding jig, and subjecting the electrode plate group to pressure of a flat surfaced pressing member from an aperture of the cylindrical molding jig sufficient to flatten said electrode plate group.

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14. (Amended) The method of manufacturing a rechargeable battery according to claim 11 or 12, wherein a top edge portion of the at least one first current collector is bent orthogonally with respect to the axis of the spiral and forms a continuous spiral edge.

(Please add the following claims.)

c5
-- 15. (New) The rechargeable battery according to claim 5, wherein the flat plane of the at least one first current collector and the flat plane of the at least one second current collector are formed simultaneously.

16. (New) The method of manufacturing a rechargeable batter according to claim 10, wherein the flat plane of the at least one first current collector and the flat plane of the at least one second current collector are formed simultaneously. --

REMARKS

Claims 1-16 are pending in the present application. Claims 5-14 are rejected under 35 U.S.C. §112, first paragraph. Claims 1-3, 5-7, 10 and 11 are rejected under 35 U.S.C. §102(e) as anticipated by Oweis et al., U.S. Patent No. 5,972,532. Claims